UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/680,065	10/04/2000	Peter Coad	30013630-0003	8737

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EXAMINER
CHUONG, TRUC T

ART UNIT	PAPER NUMBER
2179	

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/680,065	COAD ET AL.
	Examiner	Art Unit
	Truc T Chuong	2179

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _28 August 2004_.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
    closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-5, 13, 14, 16-25 and 28-40_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-5, 13, 14, 16-25 and 28-40_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
        application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   This communication is responsive to Amendment filed 08/28/04.

2.   Claims 1-5, 13-14, 16-25, and 28-40 are pending in this application. Claims 1, 13, 17, 22,

29, 33, and 40 are independent claims. In the Amendment, claims 1, 5, 13, 14, 16, 17, 21, 22, 28-

31, 33, 37, and 39-40 are amended, and claims 6-12, 15, and 26-27 are cancelled. This action is

made final.

Claim Rejections - 35 USC § 112

3.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
> subject matter which the applicant regards as his invention.

4.   Claims 1-5, 13-14, 16-25, and 28-40 are rejected under 35 U.S.C. 112, second paragraph,

as being indefinite for failing to particularly point out and distinctly claim the subject matter

which applicant regards as the invention.

For example, claim 1 recites the limitation "the source code" in line 4-5; and "the

graphical representation of the source code" in line 17; however, the phrase was previously

defined as "a graphical representation of the converted source code". There is insufficient

antecedent basis for this limitation in the claim. Appropriate corrections are required.

The similar problems can be found in other independent claims.

All other claims are also rejected because of their dependency.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

6.   Claims 1-5, 13-14, 16-25, and 28-40 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Per Cederqvist et al. (Version Management with CVS for CVS 1.11.3,

1992,1993) in view of Mansurov et al. (U.S. Patent No. 6,346,945 B1).

As to claim 1, Per Cederqvist teaches a method in a data processing system for displaying

versions of source code, each version reflecting an instance in an edit history (1.1 What is CVS,

page 3), the method comprising the steps of:

determining a language of the source code (1.3.1 Getting the source, page 6, .c files

(backend.c, driver.c, ...) indicate that these source codes were written in C program);

storing indications of the edits to the source code (1.3.2 Committing your changes, page

6, and 1.3.4 Viewing differences, page 7);

converting the source code with the indications of the edits from the language into a

language-neutral representation (10.3 Conflicts example, page 62-64, shows differences between

old and modified versions of the program file, and 5.3 Accessing branches show different

version numbers, pages 42-44);

using the language-neutral representation to display the <u>converted</u> the source code (a user

can use an Emacs package called emerge to help the user resolves conflicts, page 64; therefore,

to be able to solve the conflicts of the codes or versions, CVS must be somehow <u>view the source</u>

code with warning comments or debugging messages to help the user solving the conflicts of the

codes) with the indications of the all edits (the user can use a "diff" command to see exactly what

have been changed to the code in different versions, 1.3.4 Viewing differences, page 7; >>>>>

and <<<<<, pages 62-63, indicate modified part of the code, and 5.3 Accessing branches show

different version numbers, pages 42-44); and using the language-neutral representation to

simultaneously display a text representation and a corresponding graphical representation of the

converted source code (Per Cederqvist teaches a graphical user interface for operations because

CVS can be run on different platforms including Windows NT/95, 2.2.3 File Permission issues

specific to Windows, page 12, and Per Cederqvist clearly shows editing environments are VARY

with user operating systems such as: vi editor for UNIX or Notepad editor for Windows NT/95,

1.3.2 Committing your changes, page 6. Notepad and other editors of Windows NT/95 are

clearly graphical representations, which can be simultaneously displayed with the version

number of the code (the system must get/convert/parse/ the number from the original code, e.g.,

branch 1.4.2, or revision 1.4, pages 43-45), because they are used to view and edit source code

with multiple control icons for users to select from.) with the indications of the edits (>>>>> and

<<<<<, pages 62-63, indicate modified part of the code, and 5.3 Accessing branches show

different version numbers, pages 42-44) wherein the graphical representation of the converted

source code is not merely a text representation on a user interface (Notepad and other graphical

representations are not only displayed the source code in text, but also provide multiple control

icons for users to select from; >>>>> and <<<<< are not either an alphanumeric or text display);

however,

Per Cederqvist does not clearly teach using diagrammatic representation of the source code to demonstrate relationships between elements of the source code. Mansurov clearly provides systems and methods for extracting information from source code and presenting this information in the form of graphical diagrams which consist of predefined building blocks (called graphical patterns) (e.g., col. 1 lines 44-50, col. 2 lines 35-61). It would have been obvious at the time of the invention, a person with ordinary skill in the art would want to have the graphical diagram features of Mansurov in the Version Management of Per Cederqvist to ease the user by improving visualization of the source code in the graphical patterns (Summary).

As to claim 2, Per Cederqvist teaches the method of claim 1, wherein the source code and the corresponding graphical representation of the converted source code (see the rejection of converted source code of claim 1 above) are displayed sequentially ($CVSROOT, page 11).

As to claim 3, Per Cederqvist inherently teaches the method of claim 1 wherein a rate at which the source code with the indications of the edits is displayed is adjustable because any editing screens of Microsoft Windows can be resized (adjustable) minimized, or maximized.

As to claim 4, Per Cederqvist teaches the method of claim 1, wherein the source code with the indications of the edits is displayed in reverse order (10.2 Bringing a file up to date, page 61, in first paragraph shows the newest revision of the file is extracted from the repository and put in working directory).

As to claim 5, Per Cederqvist teaches the method of claim 1, wherein the graphical representation is one from a group consisting of a user case diagram, a sequence diagram (history files for each version control, page 11), a collaboration diagram, a state transition diagram, an activity diagram, a package diagram, a component diagram and a deployment diagram.

As to claims 13-14, and 31, they are similar in scope to claim 1 above; therefore, rejected under similar rationale.

As to claim 16, Per Cederqvist teaches the method of claim 13, wherein the source code is displayed after the <u>converted</u> source code (see claim 1 for converted source code) with an indication of the edit is displayed (the user can use diff command to see exactly what have been changed to the code in different versions, 1.3.4 Viewing differences, page 7, and 10.3 Conflicts example, page 62-64, display a new version 1.7 after the source code has been modified).

As to claims 17-21, they are system claims of method claims 1-5. Note the rejections of claims 1-5 above respectively.

As to claims 22-25, and 28, they are computer program product claims of method claims 1-5. Note the rejections of claims 1-5 above respectively.

As to claims 29-30, and 32, they can be rejected under similar rationale as claims 13-14, and 16 above.

As to claim 33-37, these are system claims of method claims 1-4, and 14. Note the rejections of claims 1-4, and 14 above respectively.

As to claim 38, Per Cederqvist teaches the data processing system of claim 37, wherein the memory device further comprises a transient meta model, wherein said transient meta model stores the language neutral representation of the source code (2. The Repository, page 9).

As to claims 39-40, they can be rejected under similar rationale as claims 21 and 1. Note the rejections of claims 21 and 1.

Response to Arguments

7.   Applicant's arguments filed in the Amendment, 08/28/04, have been fully considered but

they are not persuasive.

Applicants argued and Examiner disagrees for the following reasons:

a.   Per Cederqvist does not display specific indications of individual source code

edits, nor the system does display any textual or graphical representation of the source

code itself.

The CVS revision of Per Cederqvist clearly teaches the user can use a "diff"

command to see exactly <u>what have been changed to the code in different versions</u>, 1.3.4

Viewing differences, page 7; >>>>> and <<<<<, pages 62-63, indicate modified part of

the code, and 5.3 Accessing branches show different version numbers, pages 42-44.

b.   The CVS does not display the individual changes made to the source code

through time.

Notepad and other editors of Windows NT/95 can be used with the CVS

environment are clearly graphical representations, which can be simultaneously displayed

with the version number of the converted code from the original code, e.g., branch 1.4.2,

or revision 1.4 (pages 43-45), and The CVS revision of Per Cederqvist clearly teaches the

user can use a "diff" command to view exactly <u>what have been changed to the code in</u>

<u>different versions of that code</u>, 1.3.4 Viewing differences, page 7; >>>>> and <<<<<,

pages 62-63, indicate modified part of the code, and 5.3 Accessing branches show

different version numbers (pages 42-44).

Conclusion

8.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

         Logan, III et al. (Pub. No. U.S. 2001/0011367 A1) teach flowchart, codes,

compilers, and GUI (pages 1-6 and figs. 5-7).

9.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

         A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

10.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Truc T Chuong whose telephone number is 571-272-4134. The

examiner can normally be reached on M-Th and alternate Fridays 8:30 AM - 5:00 PM.

         If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Heather R. Herndon can be reached on 571-272-4136. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Truc T. Chuong

01/18/05

BA HUYNH
PRIMARY EXAMINER